UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

OZMO LICENSING LLC, Plaintiff, v. ACER INC. and ACER AMERICA CORPORATION, Defendants.	Civil Action No. 6:21-cv-01225-ADA JURY TRIAL DEMANDED

PLAINTIFF'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Statutes

Plaintiff, Ozmo Licensing LLC ("Ozmo"), submits this Claim Construction Brief in response to Acer's Opening Claim Construction Brief (ECF No. 26) ("Acer Br.").

I. INTRODUCTION

Ozmo alleges Acer infringes five patents owned by Ozmo: U.S. Patent Nos. 8,599,814 ("the '814 patent") (ECF 26-1); 9,264,991 ("the '991 patent") (ECF 26-2); 10,873,906 ("the '906 patent") (ECF 26-3); 11,012,934 ("the '934 patent") (ECF 26-4); and 11,122,504 ("the '504 patent") (ECF 26-5). Ozmo's patents teach improved systems and methods for integrating a wireless personal area network ("WPAN") infrastructure into a wireless local area network ('WLAN") infrastructure. Prior to the inventions of the patents-in-suit, problems arose when integrating WPANs into WLANs operating in the same frequency spectrum, because the WLAN and WPAN transmissions interfered with each another. Ozmo's improved systems and methods minimized interference between WLANs and WPANs that co-existed in the same wireless medium, as well as other problems arising from previous integrations of WLANs and WPANs, such as power dissipation, lack of synchronization, low transmission rates, and latency in communications.

In the prior art, nodes of a WPAN required unacceptably high levels of power dissipation to support sufficiently high data rates. In addition, hubs that switched traffic between a WLAN and a WPAN incurred unacceptable switching-induced latencies. The inventors solved these problems, first by introducing a WPAN protocol that was an overlay protocol of a WLAN protocol and that was only partially consistent with the WLAN protocol. The inventors also introduced a hub that was compliant with both that WPAN protocol and the WLAN protocol, and that maintained its connections with both the WLAN using the WLAN protocol and the WPAN using the WPAN protocol.

Other aspects of those inventions, as relevant to particular claim constructions, will be discussed in the corresponding sections below.

Ozmo expects that in construing the claims the Court will rely principally upon the intrinsic record of the five patents, which would include their claims and specifications, as well as their prosecution histories. Although each was separately prosecuted, they share a common ancestral application and thus the same specification.[1]

Each patent-in-suit also incorporates by reference the entire contents of U.S. Patent Application Ser. No. 11/376,753 (referred to in the patents-in-suit as "Vleugels I"), filed by the same inventors. (Ruderman Decl., Ex. 1)[2]. By virtue of that incorporation by reference, Vleugels I forms part of the intrinsic record of the patents-in-suit, and thus may be relied upon by this Court to construe the claims of those patents. *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000).

Because of this Court's extensive familiarity with claim construction, this Brief will forgo an introductory "Legal Standards" section, but will cite cases, where appropriate, in specific sections below.

II. LEVEL OF ORDINARY SKILL IN THE ART

Ozmo agrees with Acer (Acer Br. at 4) that a person of ordinary skill in the art would possess at least a Bachelor of Science degree in electrical engineering, computer science, computer engineering, or a closely related field with two to three years of experience in wireless communications technology.

[1] All citations to that common specification in this Brief are to the '814 patent (ECF 26-1).
[2] That application was later allowed as U.S. Patent No. 9,036,613 ("the '613 patent"). Because the written disclosure of Vleugels I is identical to the specification of the '613 patent, all citations to the written disclosure of Vleugels I in this Brief are to the specification of that patent (ECF 26-8).

III. DISPUTED TERMS

A. "Logic for processing data received via the wireless radio circuit" ('814 patent claims 1, 6, 7)

Acer's Proposed Construction	Ozmo's Proposed Construction
Means-plus-function limitation Function: processing data received from the wireless circuit Corresponding Structure: Processing Unit 28 (Fig. 6) along with associated software platform 36.	Ordinary meaning (not means-plus-function) If subject to § 112, ¶ 6: Function: processing data received via the wireless radio circuit Structure: Processing unit 28 coupled to or integrated with wireless circuit 19, software platform 36, and/or operating system 37, and their equivalents

Acer alleges this term (and three others[3]) appearing in claim 1 of the '814 patent that do not include the word "means" should nevertheless be construed as means-plus-function limitations under 35 U.S.C. § 112 ¶ 6.

Because the claim language does not include "means," § 112 ¶ 6 presumably does not apply. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015); *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018); *Dyfan, LLC v. Target Corporation*, 28 F.4th 1360, 1365 (Fed. Cir. 2022). To rebut that presumption, Acer must demonstrate the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function. The court must first "construe the limitation to determine whether it connotes sufficiently definite structure to a person of ordinary skill in the art." *Williamson*, 792 F.3d at 1349.

The only authority Acer cites for treating "logic" as if it read "means" is *Egenera, Inc. v. Cisco Sys., Inc.*, 972 F.3d 1367 (Fed. Cir. 2020), where "logic," was found to be a means-plus-

[3] One of those three ("data forwarding logic") also appears in claim 1 of the '991 patent.

function limitation. Acer Br. at 5. But in that action Egenera had argued "logic" denoted "software, firmware, circuitry, or some combination thereof," which the lower court noted, and the Federal Circuit agreed, was "so broad and formless as to be a generic black box for performing the recited computer-implemented functions."

Acer's argument that § 112 ¶ 6 would apply to any claim in which "logic for" appears was rejected in this district in *Sonrai Memory Ltd. v. Oracle Corp.*, No. 1:22-CV-94-LY, 2022 WL 800730 (W.D. Tex. Mar. 16, 2022):

> In *Egenera*, …, the Federal Circuit did not generally hold that the term "logic" is a generic substitution for "means." Rather, the § 112, ¶ 6 analysis is case and context specific. In addressing the specific circumstances at issue in *Egenera*, the Federal Circuit held that "*[a]s used*, 'logic' is no more than a 'black box recitation of structure' that is simply a generic substitute for 'means.'" *Egenera*, 927 F.3d at 1375 (quoting *Williamson*, 792 F.3d at 1350) (emphasis added).
>
> Here, the context in which the term "logic" is used in the claims and the specification of the '691 Patent provides sufficient structural meaning to a POSITA. For example, in addition to the "logic for" terms, "logic" is recited in the first element of claims 1 and 21: "a memory controller having compression/ decompression *logic*." The '691 Patent discloses that the "compression/ decompression logic ... may be either hardware or software implemented." The court notes that Defendant does not take issue with the use of "logic" in the disputed term "compression/decompression logic." In fact, both parties use the term "logic" in their proposed constructions of "compression/decompression logic," thus indicating that in the context of the '691 Patent logic has a sufficiently understood structural meaning to a POSITA.

Id. at *9 (citations omitted).

Courts in other districts have likewise concluded that the word "logic" may connote sufficiently definite structure and is not a "nonce" or "functional" word that is subject to the limitations of § 112 ¶ 6. *Uniloc USA, Inc. v. Samsung Elecs. Am., Inc.*, No. 2:17-CV-651-JRG, 2018 WL 5296046, at *18 (E.D. Tex. Oct. 24, 2018) (concluding that the term "incline logic" was not subject to 35 U.S.C. § 112 ¶ 6); *TecSec, Inc. v. IBM.*, 731 F.3d 1336, 1348 (Fed. Cir. 2013) ("[T]he term 'digital logic' designates structure to skilled artisans—namely digital circuits that

perform Boolean algebra."); *Intel Corp v. VIA Techs.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003) ("finding that "core logic" was adequate corresponding structure for a claimed function"); *Razor USA LLC v. DGL Grp.*, No. 19-12939 (JMV) (MF), 2021 WL 651257, at *19 (D.N.J. Feb. 19, 2021) (finding that 35 U.S.C. § 112 ¶ 6 did not apply and construing "control logic" as "electronic control circuitry"); *PCTEL, Inc. v. Agere Sys.*, No. C 03-2474 MJJ, 2005 WL 2206683, at *21 (N.D. Cal. Sep. 8, 2005) ("A review of the technical dictionaries supports [patentee]'s view that 'logic,' by itself, can connote structure.") (citing MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS (5th ed. 1994)); *CDN Innovations, LLC v. Grande Commc'ns Networks, LLC*, No. 4:20-CV-653-SDJ, 2021 WL 3615908, at *12 (E.D. Tex. Aug. 13, 2021) (noting that "cases illustrate that 'logic' is not a nonce word automatically subjected to the limitations of § 112, ¶ 6").

Acer's argument also conflicts with the legal principles articulated throughout *Dyfan*, where the Federal Circuit's reversal of a judgment of invalidity was based, in part, upon the unrebutted testimony "that the word 'code,' when coupled with language describing its operation, here connotes structure." 28 F.4th at 1368. The court observed that a POSITA "would understand that 'code' is a bunch of software instructions," and that that term would connote structure to a POSITA "given the availability of off-the-shelf code to perform the recited claim functions." *Id.* As much can be said for "logic," which, in the context here, is virtually synonymous with "code." *See also Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014) (noting that "[r]equiring traditional physical structure in software limitations lacking the term means would result in all of these limitations being construed as means-plus-function limitations and subsequently being found indefinite.").

To summarize, Acer's argument this claim term is subject to 35 U.S.C. § 112 ¶ 6 must fail because: (1) "means for" is not present; (2) "logic" as used in the claims is not a nonce word; and (3) the claim language itself provides sufficient structure to avoid the application of § 112 ¶ 6.

"Logic," as it appears in the context of this limitation, and the claim as a whole, should not be read as a means-plus-function limitation because the stated objectives and operation of the logic connote sufficiently definite structure—logic that processes data that is received via the wireless radio circuit.

The common specification describes the functional features of this "logic for" term in connection with the dedicated control and datapath logic that is disposed in the wireless radio circuit:

> Wireless circuit 19 is configured so as to communicate over the physical layer ("PHY") of a standard 802.11x-compliant circuit chip disposed in the wireless hub . . . Wireless circuit 19 may be an embedded System-on-Chip ("SoC"), having disposed therein a radio 21 operating, for example, in the unlicensed 2.4-GHz and/or 5-GHz frequency bands, a baseband modem 22, *dedicated control and datapath logic 23*, a central processing unit ("CPU") 24, a memory module 25 and interface circuitry 26. *CPU 24 and memory module 25 are used to implement the portion of the communications protocol that is not implemented in the dedicated control and datapath logic (also referred to as the 802.11x device drivers), together with any application-specific software.*

ECF 26-1 at 6:34-47 (emphasis added). "Logic" consistently appears throughout the specification when referring to "dedicated control and datapath logic." *See, e.g., id.* at 6:53-63, 7:12-21.

There is no dispute that off-the-shelf wireless circuit logic for processing data would have been readily available, given that "[w]ireless circuits are well known in the art and are not described herein." *Id.* at 6:47-48. That a wireless circuit would include dedicated control and datapath logic does not seem to be in dispute either; as a POSITA would understand that an off-the-shelf wireless circuit, implemented in a wireless device, would include the ability to process data it receives and generate data it wants to send. Acer itself acknowledged that "dedicated control

and datapath logic" is structure, as it identified that element as corresponding *structure* for the "data forwarding logic" term. Acer Br. at 21. Because here "logic for processing data received by the wireless radio circuit" itself connotes some structure, the presumption that § 112, ¶ 6 does not apply is determinative "in the absence of 'more compelling evidence of the understanding of one of ordinary skill in the art.'" *Dyfan*, 28 F.4th at 1366.

Acer argues that the prosecution history of the '814 patent supports its argument as to this (and two other) terms, because the examiner decided to interpret those terms under § 112 ¶ 6 for purposes of his examination. Acer Br. at 6-7. (The fourth term ("data forwarding logic") was not identified by the Examiner as subject to § 112 ¶ 6). Acer Br. at 5. The examiner announced this interpretation in a December 6, 2012, office action, ECF 26-6 at OZMO (01225)-00118, years before Federal Circuit precedent, such as *Williamson*, *Zeroclick*, and *Dyfan*, which would appear to conflict with that interpretation. In any event, the examiner's interpretation of the law is not binding on this Court or, for that matter, on the patent owner, who did not express agreement with that position.

If the Court finds § 112 ¶ 6 applies, Ozmo proposes the function and structure disclosed above. Ozmo's proposed structure for each of the elements should be adopted based on the specification's disclosures at Figures 5 and 6, and 6:34-7:28, which disclose that CPU 24 and memory module 25 are coupled to or integrated with the wireless circuit, and are used to implement the portion of the communication protocol that is not implemented in the dedicated control and datapath logic, together with any application-specific software (which may be written using an operating system 37) to form and implement a software platform 36.

B. "logic for generating data to be transmitted by the wireless radio circuit" ('814 patent claim 1)

Acer's Proposed Construction	Ozmo's Proposed Construction
Means-plus-function limitation Function: generating data to be sent by the wireless circuit Corresponding Structure: Processing Unit 28 (Fig. 6) along with associated software platform 36.	Ordinary meaning (not means-plus-function) If subject to § 112 ¶ 6: Function: generating data to be transmitted via the wireless radio circuit Structure: Processing unit 28 coupled to or integrated with wireless circuit 19, software platform 36, and/or operating system 37, and their equivalents

This term presents the same legal and factual issues as "logic for processing data," discussed above. Just as off-the-shelf wireless circuit logic for processing data would have been readily available, so also would off-the-shelf wireless circuit logic for generating data been available.

C. "logic for initiating and maintaining wireless network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first wireless network connection using a first wireless network protocol and a second wireless network connection using a second wireless network protocol, they can be maintained, at times, simultaneously with each other, in a common wireless space, wherein the second wireless network protocol is an overlay protocol with respect to the first wireless network protocol in that communications using the second wireless network protocol are partially consistent with the first wireless network protocol and at least some of the communications using the second wireless network protocol impinge on at least some antennae used for the first wireless network…" ('814 patent claim 1)

Acer's Proposed Construction	Ozmo's Proposed Construction
Means-plus-function limitation Function: initiating and maintaining wireless network connection Corresponding Structure: Processing Unit 28 (Fig. 6) and wireless circuit 27 along with associated software platform 36.	Ordinary meaning (not means-plus-function) If subject to § 112 ¶ 6: Function: initiating and maintaining wireless network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first wireless network connection using a first wireless network

Acer's Proposed Construction	Ozmo's Proposed Construction
	protocol and a second wireless network connection using a second wireless network protocol, that can be maintained, at times, simultaneously with each other in a common wireless space wherein the second wireless network protocol is an overlay protocol with respect to the first wireless network protocol in that communications using the second wireless network protocol are partially consistent with the first wireless network protocol and at least some of the communications using the second wireless network protocol impinge on at least some antennae used for the first wireless network Structure: Processing unit 28 coupled to or integrated with wireless circuit 19, software platform 36, memory module 29, radio 21, baseband modem 22, control and datapath logic 33, and/or operating system 37, as well as the methods for "Coordination of Multiple PERs" as disclosed FIGs. 11 and 12, and the "Device Discovery" procedures contemplated at 13:16-14:27, and their equivalents.

This term does not trigger application of § 112 ¶ 6 for largely the same reasons discussed above.

Additionally, this "logic" term is part of a 122-word long limitation that itself connotes sufficient structure by describing how the "logic for initiating and maintaining wireless network connections" operates. That is, the term, as further defined in the claim, does not cover *all* logic for "initiating and maintaining wireless network connections," but only such logic as has the extensive structure itemized in the remainder of the limitation. As a result, § 112 ¶ 6 does not apply.

A limitation has sufficient structure when it recites a claim term with a structural definition that is provided in the specification. *Apple*, 757 F.3d at 1299. The claim term, by its language,

limits the initiating and maintaining of wireless network connections to connections that involve two networks, with the protocol of one network being an overlay of the protocol of the other network, with the connections with the networks being maintained simultaneously in a common wireless space. In interpreting that language to determine whether it connotes sufficient structure, the court would incorporate the definitions found in the specification, *id.*, some of which are discussed in the briefing of other terms below.

If the Court finds this element does implicate § 112 ¶ 6, Ozmo proposes the function and structure disclosed above. Ozmo's proposed structure for this element should be adopted based on the specification's disclosure at Figures 5 and 6, and 6:34-7:28, which disclose that CPU 24 (also referred to as a processing unit 28 in specific examples) and memory module 25 (also referred to as memory module 29 in specific examples) are coupled to or integrated with the wireless circuit 19 (where the wireless circuit is 802.11x-compliant, referred to as wireless circuit 27), with a radio and baseband modem, and are used to implement the portion of the communication protocol that is not implemented in the dedicated control and datapath logic 33, together with any application-specific software (which may be written using an operating system 37) to form and implement a software platform 36, as well as the methods for "Coordination of Multiple PERs" as disclosed FIGs. 11 and 12, and the "Device Discovery" procedures contemplated at 13:16-14:27.

D. "data forwarding logic" ('814 patent claims 1, 11; '991 patent claims 1, 19)

Acer's Proposed Construction	Ozmo's Proposed Construction
Means-plus-function limitation Function: forwarding data between an originating node connected to one network and a destination node connected to a different network	Ordinary meaning (not means-plus-function) If subject to § 112 ¶ 6: <u>Function</u>: forwarding data between an originating node and a destination node, wherein the originating node is a node in one of the first and second wireless networks and

Acer's Proposed Construction	Ozmo's Proposed Construction
Corresponding Structure: control/datapath logic 33 (Fig. 6) along with associated software platform 36.	the destination node is a node in the other of the first and second wireless networks Structure: Software platform 36 (Fig. 6), wireless circuit 19, processing unit 28, memory module 29, radio 21, baseband modem 22, and/or control and datapath logic 33, and their equivalents

This term does not trigger application of § 112, ¶ 6 for largely the same reasons discussed above. There would obviously have been off-the-shelf software available for forwarding data between networks.

As noted above, the "data forwarding logic" limitation, as it appears in claim 1 of the '814 and '991 patents, was not asserted to be subject to §112 ¶ 6 during the prosecution history of the patents-in-suit. Acer has put forth no evidence that this term should be construed as a means-plus-function limitation other than its citation to *Egenera*, which is. insufficient to overcome by a preponderance of the evidence the presumption that § 112 ¶ 6 does not apply.

And as mentioned previously Acer's proposal that the term be construed as a means-plus-function limitation simply because of the use of the term "logic" contradicts their proposed construction, which includes "control/datapath *logic* 33" as corresponding structure. This term should thus be construed according to its ordinary meaning.

If the Court finds that the above discussed element does implicate § 112 ¶ 6, Ozmo proposes the function and structure disclosed above. Ozmo's proposed structure for this element should be adopted based on the specification's disclosure at Figures 5 and 6, 6:34-7:28, which disclose that CPU 24 (also referred to as a processing unit 28 in specific examples) and memory module 25 (also referred to as memory module 29 in specific examples) are coupled to or integrated with the wireless circuit 19 (where the wireless circuit is 802.11x-compliant, referred to

as wireless circuit 27), with a radio and baseband modem, and are used to implement the portion of the communication protocol that is not implemented in the dedicated control and datapath logic 33, together with any application-specific software (which may be written using an operating system 37) to form and implement a software platform 36.

E. "First [wireless] network / second [wireless] network" ('814 patent claims 1, 2, 6, 11; '991 patent claims 1, 2, 7, 8, 9, 13, 19)

Acer's Proposed Construction	Ozmo's Proposed Construction
Two distinct wireless networks	Ordinary meaning

The common specification describes two networks: a "first network" that uses a first protocol (such as 802.11x, sometimes referred to in this Brief as a "Wi-Fi" protocol or "WLAN" protocol) for communications between nodes on that network; and a "second network" that uses a different, overlay protocol (sometimes referred to as a WPAN protocol) for communications between nodes on that second network. There must be some overlap of the networks in that at least one node will be common to both, which node the claims of the '814 and '991 patents refer to as a "network-enabled hub," and in that the second protocol is an overlay with respect to the first protocol in that communications using the second protocol are partially consistent with the first protocol. The second network "might also comprise devices that can join, or have joined, the primary network." ECF 26-8 at 4:57-58.

F. "Overlay protocol" ('814 patent claim 1; '991 patent claims 1, 19; '906 patent claims 1, 4; '934 patent claims 1, 4, 7; '504 patent claims 1, 4, 7)

Acer's Proposed Construction	Ozmo's Proposed Construction
A protocol running on a network with at least some distinct components from the underlying network to provide added features	A protocol governing a second network, which protocol has aspects in common with a first network protocol to reduce interference such that the second and first networks can co-exist[4]

[4] This proposed construction differs from the one set forth in Acer's Brief, at 11, because Ozmo has decided the above proposed construction more accurately sets forth how the term was used in the intrinsic record, as explained below.

There should be no mystery as to the construction of "overlay protocol," because that term is discussed and defined in the intrinsic record, including the common specification of the patents-in-suit:

> *Communication with the WPAN device might use an SWN protocol* that is only partially compliant with the protocol used over a conventional WLAN and might do so without interference from the conventional WLAN, *yet usage of the WLAN is such that the WPAN device and computing device can communicate without interference. To reduce interference, the computing device coordinates the usage of the wireless medium with devices of a WLAN that may be active in the same space. Coordination is achieved by the use of a secondary network (WPAN) protocol that is an* ***overlay protocol.***

ECF 26-1 at 9:60-10:3 (emphasis added).

Vleugels I, also part of the intrinsic record, additionally supports Ozmo's proposed construction:

> [T]here are many benefits of using [a secondary wireless network ("SWN")] ***protocol such as an 802.11x overlay*** instead of an all 802.11x protocol *and by suitable design of the SWN protocol, the SWNs and the [primary wireless network ("PWN")] can co-exist ...*
>
> In the example of FIG. 3(*d*), [various wireless peripherals] might use *an SWN protocol that has many aspects in common with an 802.11x protocol,* modified to accommodate the different needs of SWN devices while *providing a measure of co-existence*.

ECF 26-8 at 10:15-29 (emphasis added).

> *A computing device is interfaced with other devices in a wireless personal area network (PAN) to enhance co-existence with a wireless local area network (WLAN*)… *The computing device coordinates activity of the wireless PAN … using a protocol that is an* ***overlay protocol*** only partially compliant with the protocol used over the WLAN but *that enables co-existence. … WLAN devices preferably can, upon hearing an overlay protocol frame, understand at least enough of the overlay protocol frame to defer use of a common wireless networking medium.*

Id. at Abstract (emphasis added).[5]

[5] The primary mechanism used by the 802.11x protocol to reduce interference and promote co-existence in a shared wireless medium is for each node following that protocol to defer transmission over the common wireless medium in a coordinated manner, so as to provide other nodes the chance to transmit over the wireless medium. See IEEE Std. 802.11-2012, Section 9.2.2: "The fundamental access method of the IEEE 802.11 MAC is a DCF known as *carrier sense*

> [I]f a single computing device is to be a part of both networks, *it is desirable to re-use specific PWN features and networking hardware for communication in the SWN*. Where the first network is an 802.11x network and a computing device includes 802.11x networking equipment, *an **overlay protocol** can be used for the SWN, such that 802.11x equipment can be co-opted for use with the SWN*, optimized to deal with some of the differing requirements of the two networks.

Id. at 15:48-56 (emphasis added).

> As used herein, *an **overlay protocol** is an SWN protocol that has elements that are reuses of elements of a PWN protocol to provide one or more advantages*, such as ability to use some common hardware components for both networks, the ability to communicate in the SWN without having to disassociate with the PWN, the ability to signal in the SWN with signals that are understood by SWN devices but are such that they are, if not understood, are acted upon by PWN devices to provide desirable actions. For example, *an **overlay protocol** might be such that a PWN-only device that hears an SWN packet will be able to decode the packet enough to… determine how long the wireless medium will be busy with SWN traffic so that the PWN-only device can appropriately defer*.

Id. at 9:39-52 (emphasis added).

> *The **overlay protocol** allows a dual-net device that is associated with a PWN to exchange information, possibly on the same channel as the primary network*, with [peripherals ("PERs"] that are a member of a SWN, and not a member of the PWN, and that may or may not be within the coverage range of the PWN. …As an example of PWN feature reuse, *the SWN **overlay protocol** may use modulations schemes supported by the PWN protocol* …. As another example of PWN feature reuse, *the SWN **overlay protocol** may use 802.11x frame arrangements and modifications thereof, so as to ensure that frames in the SWN can be transmitted and received by the 802.11x hardware*.

Id. at 15:56-16:6 (emphasis added).

Ozmo drafted its proposed construction to conform to the above description from the intrinsic record.

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multiple access with collision avoidance (CSMA/CA)… For a STA to transmit, it shall sense the medium to determine if another STA is transmitting. If the medium is determined to be busy, the STA shall defer until the end of the current transmission."

By contrast, Acer's proposed construction says nothing about the protocol itself. The construction does not define the protocol, but rather describes a network on which that protocol, in whatever form it takes, might run. Its construction ignores the requirement in Vleugels I that the protocol must have elements that are reuses of elements of the first network protocol to obtain the advantages such commonality provides, which advantages Vleugels I and the common specification extensively describe. The Acer construction further ignores that, according to the common specification, the overlay protocol enables the two networks to reduce interference so as to coexist.

G. "Partially consistent / partially compliant" ('814 patent claim 1; '991 patent claims 1, 19; '906 patent claims 1, 4; '934 patent claims 1, 4, 7; '504 patent claims 1, 4, 7)

Acer's Proposed Construction	Ozmo's Proposed Construction
Indefinite	Ordinary meaning (the second, overlay protocol conforms to a part, but not to the entirety, of the first wireless network protocol).

"Partially consistent" appears in the '814 and '991 patents' claims, and "partially compliant" in the claims of the '906, '934, and '504 patents, as part of the phrase "partially consistent [compliant] with [respect to] the first wireless network protocol." Because both terms would be understandable to a lay juror, the phrase should be given its ordinary meaning ("conforming to a part, but not the entirety of" the first wireless network protocol).

Acer appears to concede, albeit tacitly, that "partially consistent/compliant with the first wireless network protocol" would mean conforming to *only a part of* that protocol – as opposed to conforming to the *entire* protocol. The indefiniteness argument is thus stillborn.

Acer even admits the intrinsic record discloses various ways the second wireless network protocol could be modified ("power, frame contents, sequences, timing") to no longer conform to

the *entire* first wireless network protocol. Acer Br. at 17. Acer also acknowledges the specification suggests that could be done by designing the overlay/secondary network protocols as "802.11x frames with new frame arrangements adapted for WPAN needs. *Id.* at 16 (quoting ECF 26-1 at 9:60-10:10).

There is thus nothing indefinite about "conforming to a part, but not the entirety of" the first wireless network protocol. The Court should adopt that construction for this term.

Acer argues the broadest claims are indefinite because they do not specify "the nature of 'partial compliance' or what aspect of these factors should be adjusted." Acer Br. at 17. But all the claim requires, in this respect, is that the second network protocol (i.e., the overlay protocol) not conform *entirely* to the first network protocol. Any of the modifications to the first protocol that the common specification and Vleugels I describe would fill the bill.

Acer's argument that the claim does not specify "the nature of 'partial compliance' or what aspect of these factors should be adjusted," Acer Br. at 17, is more properly directed to the construction of "overlay protocol," discussed earlier. What Acer is really arguing is that a POSITA would not be certain what modifications to the first wireless protocol would result in an "overlay protocol." But that argument fails in view of the intrinsic record.

In the claims, "partially consistent" always modifies communications that use the "overlay protocol." For example:

> wherein the **second wireless network protocol is an overlay protocol** with respect to the first wireless network protocol *in that communications* **using the second wireless network protocol are partially consistent** with the first wireless network protocol

ECF 26-1 at 14:63-67 (emphasis added). The more appropriate question for claim construction is whether this limitation, which includes both terms, is indefinite. The intrinsic record, however, is extensive on this issue.

This claim limitation is readily understood in light of the common specification:

> Communication with the WPAN device might use an SWN protocol that is only partially compliant with the protocol used over a conventional WLAN and might do so without interference from the conventional WLAN, yet usage of the WLAN is such that the WPAN device and computing device can communicate without interference. *To reduce interference, the computing device coordinates the usage of the wireless medium with devices of a WLAN that may be active in the same space. Coordination is achieved by the use of a secondary network (WPAN) protocol that is an overlay protocol that is partially compatible with the WLAN protocol*, but not entirely. …

ECF 26-1 at 9:60-10:5 (emphasis added).

The meaning of this limitation, as used in the claims, is also readily understood when considering Vleugels I:

> [T]here are many benefits of using *an SWN protocol such as an 802.11x* ***overlay*** *instead of an all 802.11x protocol and by suitable design of the SWN protocol, the SWNs and the PWN can co-exist* and, in the case of dual-net devices, can reuse common network interface devices for the dual net device's participation in both a PWN and an SWN.
>
> In the example of FIG. 3(*d*), it may be expected that mouse **320**, keyboard **322**, mobile phone **340** and headset **306** are not programmed for, and/or do not have circuits to support, use with an 802.11x primary network, but nonetheless they might use *an SWN protocol that has many aspects in common with an 802.11x protocol, modified to accommodate the different needs of SWN devices while providing a measure of co-existence*.

ECF 26-8 at 10:15-32 (emphasis added).

> A computing device is interfaced with other devices in a wireless personal area network (PAN) to enhance co-existence with a wireless local area network (WLAN)… The computing device coordinates activity of the wireless PAN as a coordinator for the wireless PAN, including communicating with the wireless PAN devices *using a protocol that is an overlay protocol only partially compliant with the protocol used over the WLAN but that enables co-existence*. The WLAN can be an 802.11 wireless LAN. *WLAN devices preferably can, upon hearing an overlay protocol frame, understand at least enough of the overlay protocol frame to defer use of a common wireless networking medium*.

Id. at Abstract (emphasis added).

As shown above, the common specification and Vleugels I describe an "overlay protocol" as one that prevents devices compliant with that protocol from interfering with devices compliant with the first protocol (i.e., such that these devices can co-exist).

The common specification also includes clear guidance as to the modifications one might make when implementing an overlay protocol that is partially consistent with the underlay protocol in, at least, its detailed description of FIGS. 10 and 11 at ECF 26-1 at 12:19-25, with the title "Coordination of Multiple PERs":

> When a secondary network [i.e., a network running a protocol that is an overlay protocol that is partially consistent with respect to the first network (underlay) protocol] includes multiple PERs as illustrated in FIG. **10**, it may be desirable to coordinate data exchanges in order to minimize the power dissipation, as well as to minimize the WM occupancy. A method to coordinate the communication between a COORD and multiple PERs is shown in FIG. **11** [i.e., how nodes in the secondary network access the wireless medium]."

The common specification then includes details as to how the device discovery procedure of a protocol that is an overlay protocol of an 802.11x protocol may reuse some elements required by the 802.11x device discovery procedure, and not reuse other elements required by the 802.11x device discovery procedure [i.e., made "partially compliant"]. *Id.* at 13:10-14:27.

The common specification includes additional guidance as to the modifications that would implement an overlay protocol that is partially consistent with the underlay protocol in, for example, its detailed description of FIG. 3:

> *In embodiments in which PS-STAs **11** are not fully compliant with the 802.11x specification, the drivers or firmware of the 802.11x-compliant wireless circuit* at the other end of the communication link (i.e., the device with which the PS-STA is interacting) *may require modification*. Thus, in some implementations, both the wireless circuit at the other end as well as the PS-STA are 802.11x-compliant, while in others the wireless circuit at the other end is 802.11x-compliant, but the PS-STA is not a fully compliant 802.11x wireless circuit, while in yet other implementations the driver or firmware of the 802.11x-compliant wireless circuit at the other end of the link requires modifications to accommodate the PS-STA.

ECF 26-1 at 5:37-48.

Vleugels I contains even more detail about building a second, overlay network protocol by suggesting exemplary permitted (i.e., in light of the requirements of an "overlay protocol", as detailed above) modifications to the first wireless network protocol. *See, e.g.*, ECF 26-8 at 5:21-32 (an example where "a shareable network circuit may store two media addresses … to distinguish and separate traffic from different networks"); 11:49-64 (a situation where the signals required by the first network, such as an 802.11b rate, may not be suitable in the second, overlay network); 14:57-60 (suggesting eliminating headers and other fields of the first network protocol, if not needed for communication in the second network); 17:15-19 (disclosing an embodiment where "HCCA data frames with 'from DS' and 'to DS' fields both cleared might automatically be recognized by the 802.11x stack as wireless PAN traffic"); 19:3-15 (disclosing an embodiment where the data rate for communications in each of the first and second networks may be set independently). *See also id.* at 9:47-52; 14:63-15:3; 15:20-26; and 16:7-19.

Acer mentions that Bluetooth had been "identified as not being 'partially consistent' with the main protocol," despite substantial differences between the Bluetooth protocol and the Wi-Fi protocol, citing ¶ 38 of the Min declaration, ECF 26-10. Acer Br. at 17. But in the portion of the declaration Acer cites, the basis on which Bluetooth was said to have been distinguished was that it was not an "overlay protocol." ECF 26-10 at ¶ 38.

As to the narrowest claims, Acer's argument is even more difficult to understand. Acer Br. at 19-21. Acer seems to be arguing that perhaps certain modifications to the first network protocol might not be effective to effect an overlay protocol: "Is a change in one field enough? What about a change to all fields but one?" *Id.* at 20. Acer's argument ignores that (i) "partially consistent" is only used in the claims in conjunction with "overlay protocol", and (ii) the meanings of all claim

elements that include "partially consistent" are clear when those terms are construed in combination with "overlay protocol" (and, in particular, the words "*in that communications*," as explained above).

The response to Acer's argument "Is a change in one field enough? What about a change in all fields but one?" is that a protocol is an "overlay protocol partially consistent with a first protocol" if it does not conform to the entirety of the first protocol but conforms to the extent required to prevent devices compliant with the second protocol from interfering with devices complaint with the first protocol (i.e., such that these devices can co-exist). This definition is set forth in the common specification excerpts earlier in this section, some of which are reproduced below, with a slightly shifted emphasis:

> *Communication with the WPAN device might use an SWN protocol that is only partially compliant with the protocol used over a conventional WLAN* and might do so without interference from the conventional WLAN, *yet usage of the LAN is such that the WPAN device and computing device can communicate without interference.*

ECF 26-1 at 9:60-65 (emphasis added).

> A computing device is interfaced with other devices in a wireless personal area network (PAN) to enhance co-existence with a wireless local area network (WLAN)… *The computing device coordinates activity of the wireless PAN as a coordinator for the wireless PAN, including communicating with the wireless PAN devices using a protocol that is an overlay protocol only partially compliant with the protocol used over the WLAN but that enables co-existence.* The WLAN can be an 802.11 wireless LAN. WLAN devices preferably can, upon hearing an overlay protocol frame, understand at least enough of the overlay protocol frame to defer use of a common wireless networking medium.

ECF 26-8 at Abstract (emphasis added).

> In the example of FIG. 3(*d*), it may be expected that mouse **320**, keyboard **322**, mobile phone **340** and headset **306** are not programmed for, and/or do not have circuits to support, use with an 802.11x primary network, but nonetheless they might use *an SWN protocol that has many aspects in common with an 802.11x protocol, modified to accommodate the different needs of SWN devices while providing a measure of co-existence*."

Id. at 10:14-32 (emphasis added).

H. "Configured to agree / can agree / mutually agreeable" ('814 patent claim 5; '991 patent claims 8, 11, 12, 20; '906 patent claims 1, 4; '934 patent claims 1, 4; '504 patent claims 1, 4)

Acer's Proposed Construction	Ozmo's Proposed Construction
The first and second wireless devices jointly determine an inactivity time.	Set up to be able to come to an arrangement or understanding.

Acer has lumped together under a single heading different claim terms, which should be separated into two groups for claim construction.

The first group consists of "mutually agreeable," "configured to agree," and "provides for the [devices] to agree," where the agreement is as to an "inactivity period" or "inactivity time":

> hub includes logic to coordinate a mutually agreeable inactivity period between the network-enabled hub and wireless personal area network (WPAN) devices

ECF 26-1 at 15:32-34.

> the first wireless device and second wireless device are configured to agree on the inactivity time in accordance with the WPAN protocol

ECF 26-3 at 15:51-53.

> the WPAN protocol provides for the first wireless device and the second wireless device to agree on the inactivity time

ECF 26-4 at 15:54-56.

The second group consists of "can agree," where the agreement is as to partial disablement of the wireless connection:

> the WPAN protocol provides for an inactivity time during which the first and second wireless device can agree to at least partially disable the wireless connection.

ECF 26-3 at 15:47-50. The two groups are related because, as the claim language suggests, the reason for the inactivity time is to provide an interval during which the wireless connection would be partially disabled.

The support for these limitations in the common specification appears at ECF 26-1 at 11:52-58 and 12:13-19:l:

> Because the dual-net device may be a regular STA in the first WLAN, it can power down as needed without problems, unlike an access point. However, since it is also the COORD, peripheral communication could be lost if the peripheral is powered up but the dual-net device/COORD is not. This can be dealt with using mutually agreeable inactivity periods.
> …
> To conserve power at the WPAN device and the computing device, they can agree on an inactivity time and disable at least a part of a coordination function of the computing device following a start of the inactivity time, wherein disabling is such that less power per unit time is consumed by the network circuit relative to power consumed when not disabled.

The common specification, at ECF 26-1 at 12:20-13:4, also describes, and FIG. 11 illustrates, coordination of data exchanges by agreement between the peripherals (PERs) and a hub when there are multiple PERs, in which different timeslots are assigned to each PER for data transmission.

It is clear from the language of these limitations and the corresponding portion of the common specification that 1) the inactivity period is one during which the WPAN device is partially disabled or powered down; and 2) the devices are "configured to agree" on the inactivity time by the WPAN protocol, which runs on both devices, and determines a beginning and duration of that period that would work for both devices.

Ozmo thus proposes "set up to be able to come to an arrangement or understanding" to describe the role played by the WPAN protocol. Ozmo's construction of "configured to agree" ("set up to be able to come to an arrangement or understanding") would thus fulfill the purpose of the invention.

Acer would add "jointly" to narrow the claim to try to exclude embodiments in which the WPAN protocol provides for the hub device to suggest the beginning and duration of the period

and the WPAN device to acquiesce. But the intrinsic record, set forth above, provides no rationale for excluding an embodiment that operates in that matter. That a particular inactivity period agrees with the needs of the WPAN device should suffice.

Further, meaning should be given to the phrase "in accordance with the WPAN protocol," which defines "configured to agree on the inactivity time." If the WPAN protocol establishes an inactivity time with which devices running that protocol comply, then the inactivity time has perforce been "agreed on."

I. "Personal Area Network" ('814 patent claims 3, 5; '991 patent claims 11, 19, 20; '906 patent claims 1, 4, 6, 7, 8, 9, 10, 11, 12; '934 patent claims 1, 4, 7, 8, 9; '504 patent claims 1, 4, 7, 8, 9, 12, 14)

Acer's Proposed Construction	Ozmo's Proposed Construction
A network, different from the local area network (LAN), that has shorter range and lower transmission power.	A short-range wireless network usable to connect peripherals to devices in close proximity.

"Personal area network" or "PAN" appears throughout the common specification and many of the claims of all asserted patents.

The common specification supports Ozmo's construction: "A WPAN is a short-range wireless network, with typical coverage ranges on the order of 30 feet, usable to connect peripherals to devices in close proximity." ECF 26-1 at 9:36-38.

Acer's proposed construction includes limitations that are not requirements of a "personal area network" as understood by a person of ordinary skill, nor are such limitations required by the claims. Specifically, Acer seeks to narrow "personal area network" by requiring that it be a network with shorter range and "lower transmission power."

The citations to the specification that Acer relies upon to support its position only serve to highlight why its construction is improperly limiting. Acer first cites to ECF 26-1 at 1:25-29: "The present invention generally relates to wireless communications. More particularly, the invention

relates to seamlessly integrating short-range wireless personal area networks ('WPANs') into longer-range wireless local area networks ('WLANs')." Ozmo does not dispute a personal area network is a short-range network, as can be seen by its proposed construction. Ozmo submits, however, that its construction more precisely captures the extent to which a personal area network is "short-range" by reference to the proximity of peripheral devices (e.g., a keyboard, a printer, a mouse, and devices that provide visual, audio, and tactile outputs) to their connected computing devices.

The next few citations Acer relies upon, at 2:45-3:27, are stated to be "[o]ne alternative for avoiding" the problems that presented in then-existing integrations of WPANs with WLANs. *Id.* at 2:45. Embodiments and examples appearing in the specification are generally not read into the claims. *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). As Acer quotes, the specification states that "[a] wide variety of PAN devices are contemplated that are adapted for short-range wireless communications, typically bi-directional and *typically* low power so as to conserve a PAN device's limited power source." ECF 26-1 at 10:33-37 (emphasis added). "Typically" does not mean "always."

Other portions of the specification, which Acer overlooks, indicate that the "personal area network" need not always comprise low-power nodes and thus need not always use low transmission power. *See, e.g.*, *id.* at 11:7-8 (stating, "*[w]hile not always required*, the PERs are power-sensitive devices" (emphasis added)). *See also id.* at 12:6-9 ("It may be that power for wireless printer 126 comes from an external power outlet, in which case power consumption might be less of a concern…."). *See also, id.* at 11:47-52 ("In *this example*, the secondary wireless networks are assumed to be used for WPAN functionality. The WPAN can be used for, *but is not limited to*, fixed data rate applications …" (emphasis added)). Acer's construction also contradicts

teachings in Vleugels I, which also make clear that parts of a personal area network are purposely operated at higher power settings to help provide connectivity for lower-power devices in the same personal area network. See, for example, ECF 26-8 at 15:4-19:

> If the transmission and receive range of one or more members of a secondary network are reduced to conserve power, frames transmitted by the PER might not be detectable by members of the primary network and communication among members of the primary network might not be detected by the PER. This can lead to interference between both networks, especially if both networks operate in the same frequency band and on the same channel. This … can also be dealt with using a common band or set of bands and a common channel or set of channels. One such coordination method comprises a novel WM access procedure *where a powerful STA, like the COORD, reserves the WM for a low power node, like the PER*. The WM reservation would be heard by devices in a primary network that could not be reached by the PER.

(Emphasis added) and 19:48-50 ("*The 802.11x STA can reserve a wireless medium for a weak peripheral*, effectively solving a 'hidden node' problem for the low-power peripheral or other such device" (emphasis added)).

Because the term, as discussed throughout the specification, does not require that the "personal area network" protocol always impose any limit on range or transmission power, those limitations should not be read into the claims.

J. "At least partially disable the wireless connection" ('906 patent claims 1, 4; '934 patent claims 1, 4; '504 patent claims 1, 4)

Acer's Proposed Construction	Ozmo's Proposed Construction
Turn off a portion of the wireless circuit to save power.	Ordinary meaning (To make at least part of the wireless connection inactive.)

This term appears only in the claims of the three most recently issued asserted patents. Acer seeks to narrow the claims to require "at least partially disabl[ing] the wireless connection" to mean "turn[ing] off a portion of the wireless circuit to save power."

The term is readily understood by its ordinary meaning; its construction requires a *connection*. Acer's proposed construction however, strays far from the terms ordinary meaning. A circuit is not a connection.

Acer's proposed construction also improperly equates "partially disable" with "turn off." Acer's own citations to the specification cut against their proposed construction. For example, their citation to Vleugels I, ECF 26-8 at 15:20-26, states: "*As an example*, the PER and COORD may agree on inactivity times, and *disable at least part of the logic and/or circuitry* at the start of an inactivity time" (emphasis added). This example highlights that the circuitry itself need not be turned off; turning off a portion of the wireless circuit is just one way that the devices may "at least partially disable the wireless connection."

Acer's proposed construction also improperly reads in a requirement that the partial disablement of the wireless connection be to "save power," which unnecessarily narrows the claim. "Partially disabl[ing]" the wireless connection "to conserve power" is actually contemplated in further limitations appearing in some of the claims. Thus, construing this term to require some power restriction, as Acer suggests, is improper. *See, e.g.*, '906 patent claim 1, ECF 26-3 at 15:47-50 (claiming, "wherein the WPAN protocol provides for an inactivity time during which the first and second wireless devices can agree to *at least partially disable the wireless connection*" (emphasis added) and in a later limitation claiming, "wherein the disabling is such that less power per unit time is consumed by the wireless radio circuit relative to a power per unit time is consumed by the wireless radio circuit when the at least part of said coordination function is not disabled."). *Id.* at 15:57-61.

Acer's construction would also read out embodiments in which the wireless connection is partially disabled to achieve goals other than the saving of power, such as simply reducing wireless medium (WM) occupancy. See, for example, ECF 26-1 at 12:20-48:

> When a secondary network includes multiple PERs as illustrated in FIG. **10**, it may be desirable to coordinate data exchanges in order to minimize the power dissipation, *as well as to minimize the WM occupancy***.** A method to coordinate the communication between a COORD and multiple PERs is shown in Fig. **11**
>
> …At time T_0, the COORD contends for the WM and, optionally using the highest priority queue (AC-VO) transmits a first frame, frame **1**. *The duration field of this frame has been increased to reserve the WM for the subsequent frame transmission by the PERs* of the secondary network that are scheduled for a frame exchange during the current frame exchange sequence…
>
> Furthermore, frame **1** contains a list of PERs it expects to respond, as well as an offset for each scheduled PER. *At the specified offset, each PER is awake and responds with a frame containing its data (frame **2P1** and frame **2P2.** … Optionally, PERs can return to sleep during the time slots where the COORD is communicating with other PERs.*

(Emphasis added).

Because the term's ordinary meaning is readily understood, the Court should adopt Ozmo's proposed construction, which does not import limitations into the claim.

IV. CONCLUSION

For the reasons stated above, Ozmo respectfully asks the Court to construe the claims in the manner argued above.

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Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above document has been delivered to all counsel of record through the Court's CM/ECF service on this 15th day of July, 2022.

/s/ Karl Rupp